SYSTEMATIC REVIEWS AND META-ANALYSES

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In-Person Session 5 of 5

COURSE WEBSITE

- Slides and all other resources you'll need for the course are available at:

https://facenteconsulting.com/srmacourse/

CURRICULUM

Monday

- Sensitivity analyses & stratified analyses
- Understanding SRMA limitations
- Interpreting and reporting results

Tuesday

- Review and practice defining the review question and PICOS criteria to be used
- Work time

Wednesday

- Tips and Tricks with Covidence
- Work time

Thursday

- Deeper dive into evaluating bias
- Publishing your review
- Work time

Friday

- Reviewing special types of SRs and MAs
- Final chance for Q&A from the course

Virtual in October

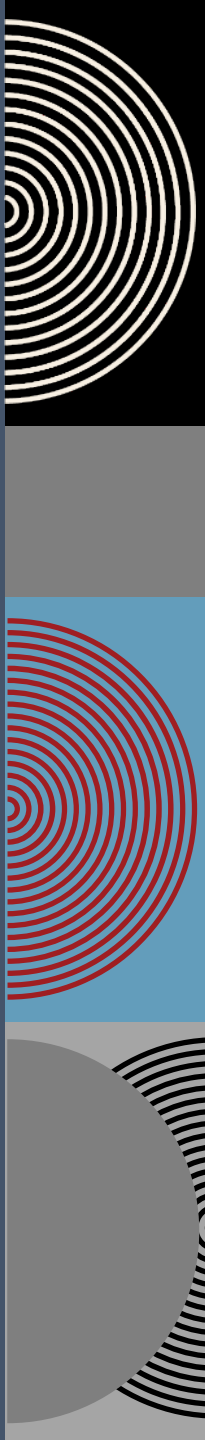
- Overview of SRs and MAs
- PROSPERO and PRISMA
- Defining the review question
- Searching for records and studies
- Extracting and organizing data
- Summarizing data and meta-analysis
- Evaluating Bias

EXERCISE: SYNTHESIZING DATA IN YOUR REVIEW

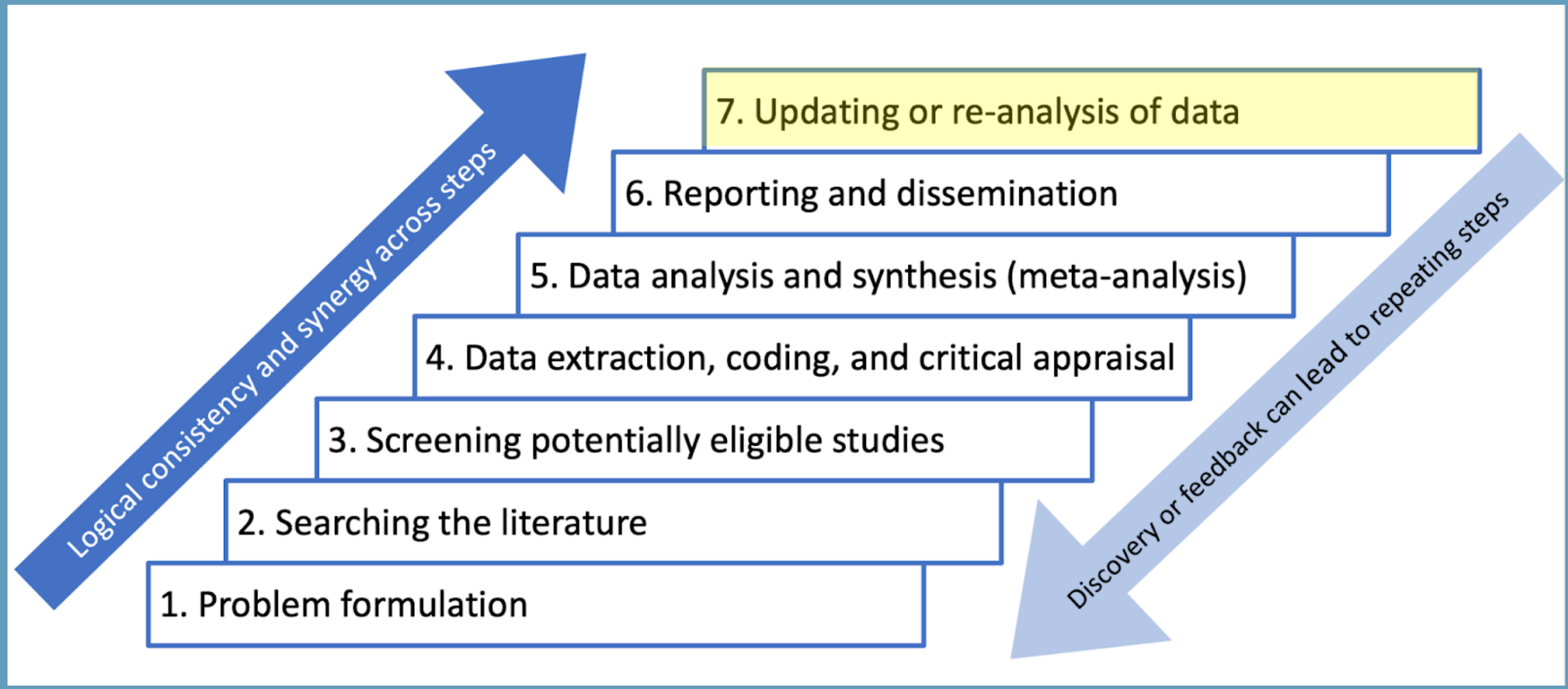
Work with a partner to review two files on the course website from Virtual Day 2 (9 October):

Appalachian SRMA Data Extraction Tool
Appalachian SRMA (Publication)

What do you notice about how data are extracted, and how we summarized it in the actual paper?



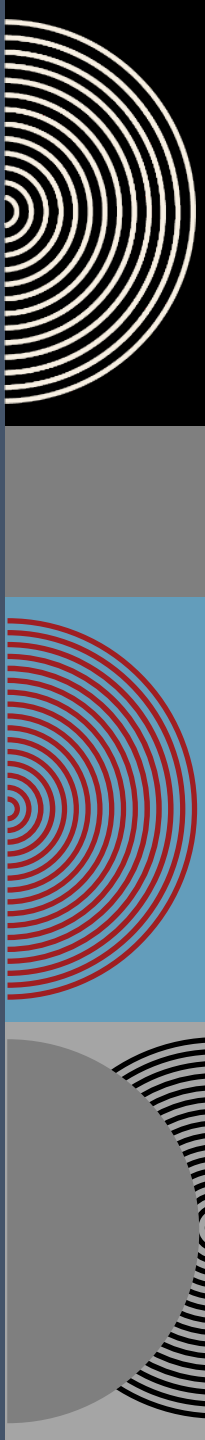
SYSTEMATIC REVIEWS PROCESS



https://oli.cmu.edu/courses/systematic-reviews-and-meta-analysis-o-f/#

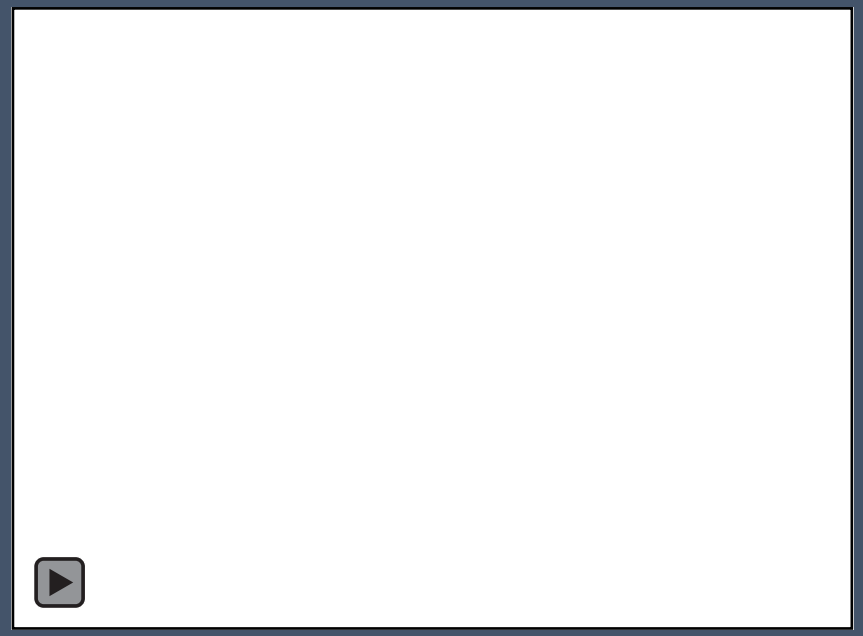
WHY UPDATE OR RE-ANALYZE?

1. You know there have been some significant developments in the field
2. You have reason to believe that inclusion of studies from another geographic region, subpopulation, or study type would change the findings (and your understanding of the situation)
3. You have reason to believe you overlooked some sort of bias
4. It's been awhile and you're curious how the landscape has changed



HOW TO UPDATE A REVIEW

- Don’t reinvent the wheel!
- Reuse your search strategy (unless you think changes are warranted) and change the timeframe of your search

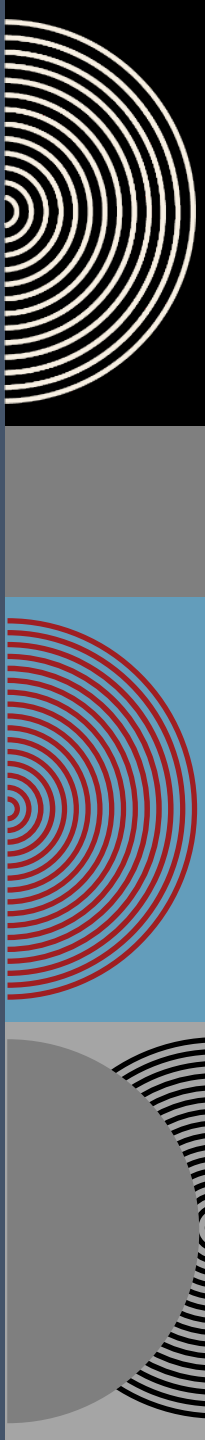


- Incorporate new studies and reuse the original ones
- Publish an update that makes it clear it’s an update from a prior review

KEY TAKEAWAYS FROM THE COURSE

A systematic review should…

1. Be SYSTEMATIC
    - Reproducible
    - Closely following a protocol
2. Be pre-registered in PROSPERO
3. Be designed to answer a clear and specific research question
4. Follow clear inclusion/exclusion criteria (use PICO)
5. Use a methodical screening procedure (involving two people who compare results)
6. Keep track of what is found and excluded, *and* why (used for Fig. 1)
7. Assess study quality: review findings are only as good as the included studies
8. Assess publication bias (funnel plot)
9. Consider heterogeneity (esp. for meta-analyses)
10. Be reported following PRISMA guidelines!
    - Most readers will look at your discussion and conclusions -- be sure you are interpreting results accurately (Replication / sensitivity analysis?)



Q&A

When poll is active respond at **PollEv.com/shelleyf800**

Send **shelleyf800** to **22333**

THANK YOU

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